



**UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office**

Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231

✓ 0

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
-----------------	-------------	----------------------	---------------------

09/057,628 04/09/98 KUO

D 3157

EXAMINER

LM02/0421

GREG T SUEOKA  
FENWICK & WEST  
TWO PALO ALTO SQUARE  
PALO ALTO CA 94306

TUNG, K

ART UNIT

PAPER NUMBER

2773

DATE MAILED:

04/21/99

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner of Patents and Trademarks**

# Office Action Summary

Application No.

9/057,628

Applicant(s)

Kuo et al

Examiner

K. Tung

Group Art Unit

2776

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

## Status

- ☐ Responsive to communication(s) filed on 4/9/98
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- ☒ Claim(s) 1-20 is/are pending in the application.
- Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- ☒ Claim(s) 1-20 is/are rejected.
- ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- ☐ Claim(s) \_\_\_\_\_ are subject to restriction or election requirement.

## Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
  - ☐ All ☐ Some\* ☐ None of the CERTIFIED copies of the priority documents have been received.
  - ☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_.
  - ☐ received in this national stage application from the International Bureau (PCT Rule 1.7.2(a)).

\*Certified copies not received: \_\_\_\_\_

## Attachment(s)

- ☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 4
- ☐ Interview Summary, PTO-413
- ☒ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Informal Patent Application, PTO-152
- ☒ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Other \_\_\_\_\_

Office Action Summary

Art Unit: 2776

## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

1. Claims 8-10 and 12-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As per claim 8, line 6, "a third storage device" is indefinite because it is not clear whether this third storage device is same as the one in line 5 of claim 1 or not.

As per claim 9, line 3, "the second storage module" should be --the second storage device--

As per claims 12 and 13, line 1, "claim 1" should be --claim 11--.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

3. Claims 1-3, 8-13 and 18-20 are rejected under 35 U.S.C. § 102(e) as being anticipated by Alcorn et al (5,886,706).

Art Unit: 2776

Alcorn et al teaches a non-stalled requesting system (Fig. 2) comprising a first storage device (main memory 17) for storing a plurality of texels; a second storage device (cache memory 48) coupled to the first storage device for storing a first texel of the plurality of texels; a third storage device (cache directory 78) for storing an association between a first identifier signal and the first texel; a first logic device (tiler and boundary checker 72) coupled to the second storage device and the third storage device for responding to a second identifier signal matching the first identifier signal by triggering the transmission of the first texel from the second storage device and for responding to the second signal not matching the first identifier signal by retrieving a second texel of the plurality of texels from the first storage device the second texel having an association with the second identifier signal (abstract; col. 4, lines 50-58; col. 13, lines 8-48; col. 18, lines 26-45). Therefore, claim 1 is anticipated by Alcorn et al.

As per claim 2, Alcorn et al teaches a second logic device (texel cache access circuit 82) coupled to the first logic device for synchronizing the transmission of the first texel from the second storage device.

As per claim 3, Alcorn et al teaches a third logic device (texel cache access circuit 82) coupled to the first logic device for synchronizing the transmission of the second texel from the second storage device.

Claim 8 is similar in scope to the combination of claims 2 and 3, and thus are rejected under similar rationale.

As per claims 9 and 10, Alcorn et al teaches a first FIFO buffer (Fig. 8, 214).

Art Unit: 2776

Method claims 11-13 and 18-20 are similar in scope to system claims 1-3 and 8-10, and thus are rejected under similar rationale.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 4-7 and 14-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Alcorn et al (5,886,706).

The teachings of Alcorn et al are given in previous paragraph of this Office action. However, Alcorn et al fails to explicitly teach a fourth storage device for storing an association between the second storage device and a plurality of logic states. It would have been obvious to one of ordinary skill in the art at the time the present invention was made to implement the teachings of Alcorn et al in order to store the information since the cache directory of Alcorn et al stores and identifies the associate information. Therefore, claim 4 would have been obvious.

As per claim 5, Alcorn et al fails to explicitly teach a first counter coupled to the first logic device for responding to the second identifier signal matching the first identifier signal by changing a first value to a second value. It would have been obvious to one of ordinary skill in the art at the

Art Unit: 2776

time the present invention was made to implement the teachings of Alcorn et al in order to more effectively count the stored information. Therefore, claim 5 would have been obvious.

Claim 6 is similar in scope to claim 5, and thus is rejected under similar rationale.

Claim 7 is similar in scope to the combination of claims 3 and 5, and thus is rejected under similar rationale.

Method claims 14-17 are similar in scope to system claims 4-7, and thus are rejected under similar rationale.

### ***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Emmot (5,751,292) teaches a texture mapping method and system which is similar to Alcorn et al.

Wilde (5,828,382) teaches an apparatus for dynamic XY tiled texture caching.

Wang et al (5,831,640) teaches an enhanced texture map data fetching circuit and method.

### ***Responses***

7. Responses to this action should be mailed to:

**Commissioner of Patents and Trademarks  
Washington, D.C. 20231.**

If applicant desires to fax a response, (703) 308-9051(52) may be used for formal communications or (703) 308-6606 for informal or draft communications.

Art Unit: 2776

Please label "PROPOSED" or "DRAFT" for informal facsimile communications. For after final responses, please label "AFTER FINAL" or "EXPEDITED PROCEDURE" on the document.

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

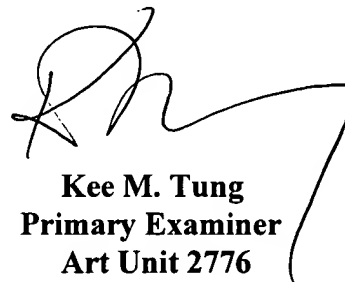
*Inquires*

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Kee M. Tung** whose telephone number is (703) **305-9660**. The examiner can normally be reached on **Monday - Thursday from 7:30 am to 5:00 pm**. The examiner can also be reached on alternate **Friday**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Michael Razavi**, can be reached on (703) **305-4713**.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) **305-3800**.

April 19, 1999



**Kee M. Tung**  
**Primary Examiner**  
**Art Unit 2776**